

**SYSTEM AND METHOD FOR COOLING A SUPER-
CONDUCTING DEVICE**

ABSTRACT

[0034] A system and method for cooling a superconductive rotor coil. The system comprises a rotatable shaft coupled to the superconductive rotor coil. The rotatable shaft may comprise an axial passageway extending through the rotatable shaft and a first passageway extending through a wall of the rotatable shaft to the axial passageway. The axial passageway and the first passageway are operable to convey a cryogenic fluid to the superconductive rotor coil through the wall of the rotatable shaft. A cryogenic transfer coupling may be provided to supply cryogenic fluid to the first passageway.